Release notes for ENDF/B Development n-055_Cs_136 evaluation

April 26, 2017

- `checkr` Warnings:

  1. A previous error halted parsing of the current section
     MAT=5534, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=5534, MF= 1, MT=451
   SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      210 TO     242
```

- `checkr` Errors:

  1. A variable is outside the allowed ENDF range
     MAT=5534, MF= 1, MT=451 (0): Variable range

```
ERROR(S) FOUND IN MAT=5534, MF= 1, MT=451
   MOD =     1 OUT OF RANGE     0 -     0           RECORD NUMBER     210
```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5534, MF= 2, MT=151 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 2, MT=151
   SECTION  2/151 NOT IN DIRECTORY                 RECORD NUMBER     244
```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5534, MF= 3, MT= 1 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT=  1
   SECTION  3/  1 NOT IN DIRECTORY                 RECORD NUMBER     601
```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5534, MF= 3, MT= 2 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT=  2
   SECTION  3/  2 NOT IN DIRECTORY                 RECORD NUMBER     631
```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5534, MF= 3, MT= 4 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT=  4
   SECTION  3/  4 NOT IN DIRECTORY                 RECORD NUMBER     654
```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5534, MF= 3, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT= 16
   SECTION  3/ 16 NOT IN DIRECTORY                 RECORD NUMBER     668
```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5534, MF= 3, MT= 17 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT= 17
   SECTION  3/ 17 NOT IN DIRECTORY                 RECORD NUMBER     680
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT= 22
   SECTION  3/ 22 NOT IN DIRECTORY                 RECORD NUMBER     686
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT= 28
   SECTION  3/ 28 NOT IN DIRECTORY                 RECORD NUMBER     700
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT= 32 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT= 32
   SECTION  3/ 32 NOT IN DIRECTORY                 RECORD NUMBER     711
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT= 33 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT= 33
   SECTION  3/ 33 NOT IN DIRECTORY                 RECORD NUMBER     720
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT= 91
   SECTION  3/ 91 NOT IN DIRECTORY                 RECORD NUMBER     728
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT=102 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT=102
   SECTION  3/102 NOT IN DIRECTORY                 RECORD NUMBER     742
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT=103 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT=103
   SECTION  3/103 NOT IN DIRECTORY                 RECORD NUMBER     760
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT=104 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT=104
   SECTION  3/104 NOT IN DIRECTORY                 RECORD NUMBER     776
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT=105 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT=105
   SECTION  3/105 NOT IN DIRECTORY                 RECORD NUMBER     789
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 3, MT=107 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 3, MT=107
   SECTION  3/107 NOT IN DIRECTORY                 RECORD NUMBER     801
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 4, MT= 2 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 4, MT=  2
   SECTION  4/  2 NOT IN DIRECTORY                 RECORD NUMBER     818
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 4, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 4, MT= 16
   SECTION  4/ 16 NOT IN DIRECTORY                 RECORD NUMBER     962
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 4, MT= 17 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 4, MT= 17
   SECTION  4/ 17 NOT IN DIRECTORY                 RECORD NUMBER     973
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 4, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 4, MT= 22
   SECTION  4/ 22 NOT IN DIRECTORY                 RECORD NUMBER     984
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 4, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 4, MT= 28
   SECTION  4/ 28 NOT IN DIRECTORY                 RECORD NUMBER     995
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 4, MT= 32 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 4, MT= 32
   SECTION  4/ 32 NOT IN DIRECTORY                RECORD NUMBER    1006
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 4, MT= 33 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 4, MT= 33
   SECTION  4/ 33 NOT IN DIRECTORY                RECORD NUMBER    1017
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 4, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 4, MT= 91
   SECTION  4/ 91 NOT IN DIRECTORY                RECORD NUMBER    1028
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 5, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 5, MT= 16
   SECTION  5/ 16 NOT IN DIRECTORY                RECORD NUMBER    1040
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 5, MT= 17 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 5, MT= 17
   SECTION  5/ 17 NOT IN DIRECTORY                RECORD NUMBER    1107
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 5, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 5, MT= 22
   SECTION  5/ 22 NOT IN DIRECTORY                RECORD NUMBER    1137
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 5, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 5, MT= 28
   SECTION  5/ 28 NOT IN DIRECTORY                RECORD NUMBER    1337
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 5, MT= 32 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5534, MF= 5, MT= 32
   SECTION  5/ 32 NOT IN DIRECTORY                RECORD NUMBER    1453
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 5, MT= 33 (0): Directory (b)

```
 ERROR(S) FOUND IN MAT=5534, MF= 5, MT= 33
    SECTION  5/ 33 NOT IN DIRECTORY                 RECORD NUMBER    1513
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5534, MF= 5, MT= 91 (0): Directory (b)

```
 ERROR(S) FOUND IN MAT=5534, MF= 5, MT= 91
    SECTION  5/ 91 NOT IN DIRECTORY                 RECORD NUMBER    1552
```

- `psyche` Warnings:

1. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.60000E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                      STRENGTH FUNCTION 1.60000E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [2 more lines]
```

2. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.60003E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                      STRENGTH FUNCTION 1.60003E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [2 more lines]
```

3. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.60008E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                      STRENGTH FUNCTION 1.60008E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [3 more lines]
```

4. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.59998E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
```

```
                    STRENGTH FUNCTION 1.59998E-04
                                        LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [3 more lines]
```

5. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.59995E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                     STRENGTH FUNCTION 1.59995E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [1 more lines]
```

6. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.60005E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                     STRENGTH FUNCTION 1.60005E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

7. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.59997E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                     STRENGTH FUNCTION 1.59997E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [2 more lines]
```

8. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.60002E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                     STRENGTH FUNCTION 1.60002E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [1 more lines]
```

9. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.60006E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                        STRENGTH FUNCTION 1.60006E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

10. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.59992E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                        STRENGTH FUNCTION 1.59992E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

11. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.60004E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                        STRENGTH FUNCTION 1.60004E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

12. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.60001E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                        STRENGTH FUNCTION 1.60001E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

13. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.60000E-04 / STRENGTH FUNCTION 1.59999E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.60000E-04
                        STRENGTH FUNCTION 1.59999E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

14. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.59998E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.59998E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [4 more lines]
```

15. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.59992E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.59992E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [3 more lines]
```

16. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.60004E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.60004E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [4 more lines]
```

17. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.60000E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.60000E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

18. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.59996E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.59996E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [2 more lines]
```

19. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION

IS 1.59998E-04 / STRENGTH FUNCTION 1.59994E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.59994E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [1 more lines]
```

20. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.60006E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.60006E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [1 more lines]
```

21. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.60008E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.60008E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

22. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.60002E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.60002E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

23. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.59993E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                       STRENGTH FUNCTION 1.59993E-04
                                         LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
... [1 more lines]
```

24. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.90000E+01. STRENGTH FUNCTION IS 1.59998E-04 / STRENGTH FUNCTION 1.60007E-04 / LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  2.90000E+01. STRENGTH FUNCTION IS  1.59998E-04
                      STRENGTH FUNCTION 1.60007E-04
                                          LIES OUTSIDE LIMITS 1.00000E-05 TO 1.00000E-04
```

25. Non-threshold reaction with Q value differing from PSYCHE's expectations
FILE 3 / SECTION 103 / THE CALCULATED Q 8.95551E+05 DISSAGREES WITH THE GIVEN Q 8.49462E+05 (0): Iffy Q

```
FILE  3
   SECTION 103
            THE CALCULATED Q  8.95551E+05 DISSAGREES WITH THE GIVEN Q  8.49462E+05
```

- `recent` Warnings:

1. Fission widths given for non-fissile nucleus, but are zero
0: Fission?

```
 Calculate Cross Sections from Resonance Parameters (RECENT 2015-1)
 ============================================================================
 Retrieval Criteria-----------        MAT
 File 2 Mimimum Cross Section- 1.0000E-10 (Standard Option)
 Reactions with No Background-     Output (Resonance Contribution)
... [615 more lines]
```

- `fudge-4.0` Warnings:

1. The URR for this spin group needs higher energy resolution for correct representation of the average cross section
resonances / unresolved (Error # 0): URRinsufficientEnergyGrid

```
WARNING: More points needed in L=0 J=4.5 unresolved widths between 29. eV and 1.e2 eV
WARNING: More points needed in L=0 J=5.5 unresolved widths between 29. eV and 1.e2 eV
WARNING: More points needed in L=1 J=3.5 unresolved widths between 29. eV and 1.e2 eV
WARNING: More points needed in L=1 J=4.5 unresolved widths between 29. eV and 1.e2 eV
        ... plus 8 more instances of this message
```

2. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

```
WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.83%
```

- `fudge-4.0` Errors:

1. Energy range of data set does not match cross section range
reaction label 1: n + Cs136_c / Product: n / Distribution: / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (50371.1 -> 20000000.0) vs (50371.0 -> 20000000.0)
```

2. Calculated and tabulated Q values disagree.
reaction label 2: n[multiplicity:'2'] + Cs135 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -6642648.860565186 eV vs -6.7691e6 eV!
```

3. Calculated and tabulated Q values disagree.
reaction label 3: n[multiplicity:'3'] + Cs134 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -15404638.38653564 eV vs -1.56012e7 eV!
```

4. Calculated and tabulated Q values disagree.
reaction label 4: n + H1 + Xe135 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -7025123.418106079 eV vs -7145630. eV!
```

5. Calculated and tabulated Q values disagree.
reaction label 5: n + H2 + Xe134 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -11164417.28219604 eV vs -1.12926e7 eV!
```

6. Calculated and tabulated Q values disagree.
reaction label 6: n + H3 + Xe133 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -13459393.0247345 eV vs -1.36466e7 eV!
```

7. Calculated and tabulated Q values disagree.
reaction label 7: Cs137 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8463731.473388672 eV vs 8273390. eV!
```

8. Calculated and tabulated Q values disagree.
reaction label 8: n + He4 + I132 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -2878212.596801758 eV vs -3073890. eV!
```

9. Calculated and tabulated Q values disagree.
reaction label 9: H1 + Xe136_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 1054298.941070557 eV vs 849462. eV!
```

10. Calculated and tabulated Q values disagree.
reaction label 10: H2 + Xe135_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -4800557.317169189 eV vs -4835510. eV!
```

11. Calculated and tabulated Q values disagree.
reaction label 11: H3 + Xe134_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -4907184.341583252 eV vs -5107460. eV!
```

12. Calculated and tabulated Q values disagree.
reaction label 12: He4 + I133_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 5379815.362411499 eV vs 5.1982e6 eV!
```

- `njoy2012` Warnings:

  1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 16
                              only mf4/mf5 provided
     ```

  2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 17
                              only mf4/mf5 provided
     ```

  3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 22
                              only mf4/mf5 provided
     ```

  4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 28
                              only mf4/mf5 provided
     ```

  5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 32
                              only mf4/mf5 provided
     ```

  6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (5): GROUPR/conver (0)

     ```
     ---message from conver---cannot do complete particle production for mt= 33
                              only mf4/mf5 provided
     ```

7. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
groupr...compute self-shielded group-averaged cross-sections (6): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 91
                         only mf4/mf5 provided
```